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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,139	03/06/2002	William D. Tandy	4333.1US (99-0257.1)	9714
24247	7590	04/14/2006	EXAMINER	
TRASK BRITT			CHANG, VICTOR S	
P.O. BOX 2550			ART UNIT	
SALT LAKE CITY, UT 84110			PAPER NUMBER	
			1771	

DATE MAILED: 04/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,139

Applicant(s)

TANDY ET AL.

Examiner

Victor S. Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6,8,9,11,12,14,16,17,19,20,22 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,8,9,11,12,14,16,17,19,20,22 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/23/05, 4/3/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Introduction

1. The Examiner has carefully considered Applicants' amendments and remarks filed on 2/27/2006. Applicants' amendments to independent claims 1, 9 and 17 have been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Rejections not maintained are withdrawn.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 6 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

More particularly, upon reconsideration, it is noted that claims 6 and 14 recite the limitation "... laser-markable surface ..." at lines 2 and 1, respectively, but there is insufficient antecedent basis for this limitation in the claims. It appears that a proper antecedent basis is "outermost adhesive layer" in claims 4 and 12, respectively (e.g., see claims 20 and 22). Clarification and/or corrections are requested.

Rejections Based on Prior Art

6. Claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weng et al. (US 5972234) in view of Ishiwata et al. (US 5300172), generally as set forth in section 4 of Office action mailed 11/21/2005, together with the following additional reasoning and response to argument.

Weng's invention is directed to a tape for marking a wafer (semiconductor device). The marking tape forms an identification mark by the use of a high-intensity energy beam (column 2, lines 20-21), such as a laser (column 1, line 32). Weng also teaches that any suitable tape of polymeric based material, which can be easily patterned by high-intensity energy beams such as ultraviolet light or laser, can be used (column 4, lines 27-33). The marking tape adheres to a substrate to be marked (column 2, line 64). A release layer (outer layer) may be provided to cover the adhesive layer for protection during the laser marking process (column 4, line 64 to column 5, line 2). As to the two-layer adhesive structure, since both adhesive layers are merely recited as "a mixture of electromagnetic radiation-curable components", and the latest amended Fig. 5 (submitted 12/20/2004) also expressly shows that the two layers are of the same material 1B, the Examiner notes that Weng's adhesive single-layer structure reads on the two-layer adhesive structure of the instant invention as claimed, because the recited two-layer structure do not preclude the single layer structure of Weng to read on both of the layers of instant invention.

Second, it is noted that independent claims 1, 9 and 17 have been amended to delete a limitation of second adhesive layer as being "... for curing onto portions of the first outermost adhesive layer and for losing adhesive properties ...". The Examiner

notes that, in the absence of a clear recitation of the compositions of these adhesive layers, such an amendment appears to further, in fact, broaden the scope of the instant invention, and it still fails to preclude both the adhesive layers being read upon by the single adhesive layer of Weng.

With respect to Applicants' argument "... cited prior art fails to teach or suggest the claimed limitations ... "a tape comprising a flexible film material having a coefficient of thermal expansion substantially similar to the semiconductor device" ... "a first outermost adhesive layer comprising a mixture of electromagnetic radiation-curable components, the electromagnetic radiation-curable components providing a laser-markable surface upon exposure to an electromagnetic radiation by curing and bonding to at least a portion of a semiconductor device when laser marking a semiconductor device" and "a second adhesive layer ... facilitating peeling of the flexible film material when laser marking a semiconductor device"..." (Remarks, pages 8-9, bridging paragraph), the Examiner respectfully notes that Weng does teach each above-mentioned limitations, Applicants' argument to the contrary is not persuasive. In particular, 1) While Weng is silent about the flexible film having a coefficient of thermal expansion, since Weng does teach the same subject matter (a marking tape for semiconductor device), and use the same making method (by a laser), in the absence of evidence to the contrary, it is the Examiner's position that a release layer (flexible film) having a suitable coefficient of thermal expansion is either anticipated, or obviously provided by practicing the invention of prior art. It should be noted that where the claimed and prior art products are shown to be identical or substantially identical in

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structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. See MPEP § 2112.01. 2) Regarding the limitation of "... adhesive layer comprising a mixture of electromagnetic radiation-curable components ... curing and bonding to at least a portion of a semiconductor device ...", the Examiner now agrees that the cited prior art Weng et al. (US 5972234) lacks an express teaching that the adhesive layer comprises a mixture of electromagnetic radiation-curable components. However, it is noted that Ishiwata's invention is directed to a surface-protection method during etching. Specifically, through the use of a radiation-curable adhesive tape at the time of etching, a tape is stuck onto an adherend wafer, and then the radiation-curable adhesive layer is cured with irradiation of a radiation to form a three-dimensional network, before the etching treatment, etching resistance can be much enhanced, for example, by improving acid resistance to the etching liquid, and by lowering the water absorption (column 2, lines 49-57). As such, in the absence of unexpected results, it would have been obvious to one of ordinary skill in the art to modify Weng's adhesive layer with a radiation-curable adhesive layer, as taught by Ishiwata, motivated by the desire to obtain an enhanced etching resistance. 3) With respect to the second adhesive layer, the Examiner notes that nowhere Applicants have a disclosure in the claims or specification showing a difference in the composition between the first and second layer. In fact, the amended latest Fig. 5 shows they are both designated as layer 1B, i.e., they are of the same composition, as set forth above. Finally, the Examiner repeats that Weng expressly teaches that a release layer (outer layer) may be

provided to cover the adhesive layer for protection during the laser marking process, which reads on the releasability of the flexible film of instant invention as claimed.

With respect to Applicants' argument "... to include radiation-curable components into any adhesive layer formed in the tape disclosed by Weng et al. would render the invention inoperable. Specifically, applying any energy would cure the adhesive layer, which would prevent a pattern from being formed through the tape ..." (Remarks, page 13, middle paragraph), the Examiner notes: 1) Applicants are reminded that in the absence of factual support, attorney's argument cannot take place of evidence. 2) Applicants are also reminded that the same argument appears to argue against Applicants' own invention as inoperable, because the specification teaches the same embodiment of etching process after marking (see specification, paragraph 0036). Applicants' argument is not well taken.

Finally, with respect to Applicants' argument "... Weng et al. reference merely describes a photodecomposition process employing an excimer type laser for ablating the polymeric based tape. The Weng reference contains no description whatsoever as to how an excimer laser affects the adhesive ...", the Examiner notes that Applicants' has correctly pointed out that Weng's teaching of photodecomposition by an excimer laser, i.e., it decomposes the adhesive, which has no direct relation to the UV curability of the adhesive. Further, the combined teachings of Weng and Ishiwata renders the UV curability of the adhesive layer obvious, as set forth above. Applicants' argument is moot.

Conclusion

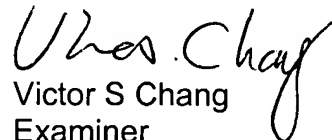
7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S. Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Victor S Chang
Examiner
Art Unit 1771

4/10/2006